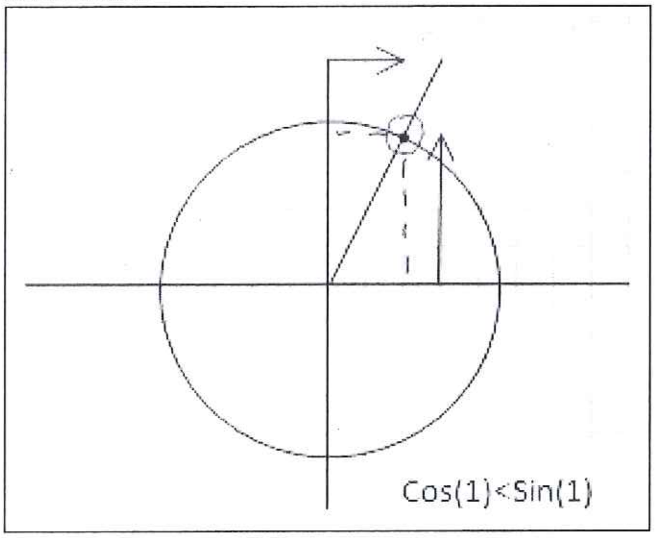
Ben, these are thorough and detailed as usual. I have two suggestions for next time (aka your last set of sc's!): ① Try to illustrate alternate methods to confirm your results (you did do this at least once, but try to find more opportunities) and ② it is not necessary to recap the problem for each one (though this is a good habit in general, but I'd rather you spend time doing ①.)

Superdupercorrection Form **Name: Ben Passey**

3 convince me that you now understand the concept. Make connections and build on the problem if possible; be sure to explain the error(s) that you made.
Original 2.5/4 Supercorrection 4/4 ✓

Problem 3 compares sine and cosine values and asks to label them as <, >, or =. I approached to problem by drawing a circle and plotting the sine and cosine values, which helped me, visualize the questions. Of the three questions I got the first two correct, and the third wrong. The third question asks if cos (1) is <, >, or = to sin (1). I said that they were =, and in fact cos (1) is < than sin (1). The answer to the question should have been obvious for me, but because I saw that the equation was cos (1) and sin (1), I made the mistake of thinking that because both sine and cosine were equal to 1, that they had equal values. If I had plotted cos (1) and sin (1) on the unit circle like I did for the questions a and b, it would have been quite obvious that sin (1), is larger than cos (1), because the rise is around twice the run, so therefore the y is greater than the x.

Correct solution:



Helped by Ms. Patterson

Steps for solving this problem
1. Plot Cos(1) and Sin(1) on a unit circle
2. Compare the rise to the run, the larger value determines if cos or sin is larger
3. To check the answer, use a graphing calculator to compare the two values

<u>Checking with a Calculator</u>

Cos (1)
.5403023059

Sin (1)
.8414709848
Therefore, Sin (1) is larger than Cos (1)

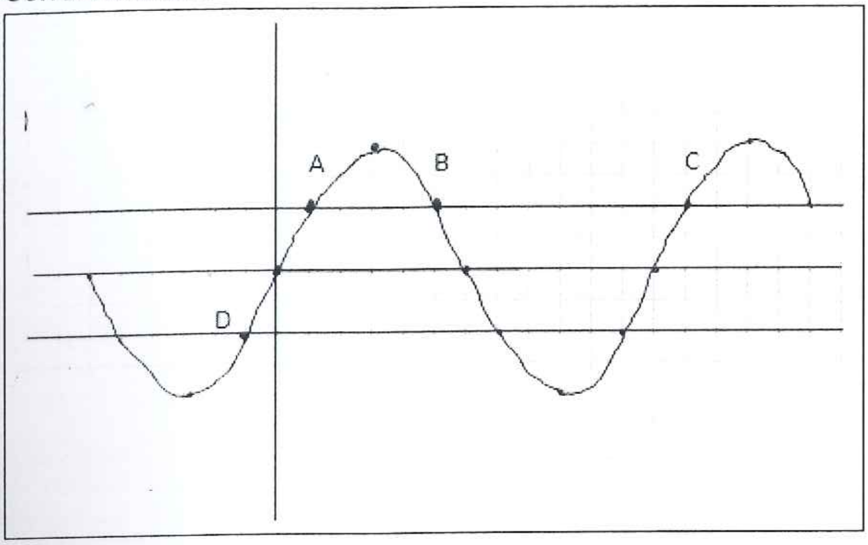
4 convince me that you now understand the concept. Make connections and build on the problem if possible; be sure to explain the error(s) that you made.
Original 2/4 Supercorrection 4/4 ✓

Question 4 provides a coordinate on a graph and asks to find three other coordinates using the coordinates of one point and the equation y = Pi/20x. I successfully found one of the three points. I found the point by looking at the graph and noticing that point D was the same distance from the y axis as point A, the given point. Point D was located in the III quadrant, which I knew meant that both the x and y were negative. I tried to find points B and C by looking at the graph and simply adding the x of point A to point A. (ex. Point A x = 4, 4+4=8, therefore 8 would be the maximum) Unfortunately, although this was a good idea, it didn't work, because the distance from point A to point B was not 4 it was in fact 6. I know it is 6 because I was given the equation y = Pi/20x. If 2pi is divided by Pi/20, the period can be found. The period was 40. Knowing the period should have tipped me off to the fact that adding 4 wasn't correct, because I knew that half a period was 20, so naturally a fourth of a period was 10, not 8. With this knowledge, I could simply subtract 4 from 10, which would give me 6, the distance from point A to a fourth of the period, or the maximum. So, knowing that the distance between point A and the maximum is 6 allows me to find point B, which is 6 away from 10, or 16. So the coordinates of point B are (16, 0.5878). There are two ways to find point C, the first way to find point C is to add 4 to point B

making the value 20, since half the period is twenty another 20 will make a full period, point C is another 4 away from the period, so if you add 4 + the period (40), you will get the coordinates of C (44, 0.5878). The other an slightly more simplistic way to find point C would to observe that from point A to point C is a period, but since point a isn't on the x axis which is where the measurements begin, it is necessary to add the distance from point A to the x axis, or 4 to the period making the distance from the x axis to point C (44, 0.5878). Either way will yield the correct answer.

two ways ✓

Correct solution:



Point Coordinates

A = (4, 0.5878)
B = (16, 0.5878)
C = (44, 0.5878)
D = (- 4, - 0.5878

Period

Y= sin (Pi/20x)
B= Pi/20
Period Formula = 2Pi/B
2pi/ pi20 = 40
Period = 40

5 convince me that you now understand the concept. Make connections and build on the problem if possible; be sure to explain the error(s) that you made.
Original ~~1.5~~ 2 /4 Supercorrection 4/4

To find x in problem 5 question A, I attempted to use the Pythagorean Theorem. I had to use the Pythagorean Theorem because I knew the triangle wasn't a 30, 60, 90 triangle. I set up the problem correctly but made a small mistake. I wrote $5^2-2^2= x^2$, when solving however, instead of squaring 5 and 2, I multiplied them by two and then subtracted. For the life of me I have no idea why I did that, but I guess I was just rushing and I made a careless mistake. When I got the answer square root of 6, it didn't look correct to me, so I just wrote the answer as 2 square root 3, which would have been the correct answer, if the triangle had been a 30, 60, 90 triangle. The small error of multiplying rather than squaring caused the entire problem to be wrong. If I had squared 5 rather than multiplied it by two, I would have had the equation $25-4 = x^2$. Therefore, the correct answer is x = the square root of 21, or 4.58. If I had taken the time to check my answer it would have been immediately apparent to me that 2 square root 3 was an impossible answer, because 2 square root 3 is equal to the square root of 12, and 12 is much larger than the other two sides of the triangle, which means that it is incorrect. If I were allowed a calculator I could have done the math on the calculator which would not have made the mistake of multiplying instead of squaring. If I had done the math correctly the first time, I could have used my calculator to confirm that the answer the square root of 21 or 4.58 was correct.

For question 5 B, I once again started out correct by setting up the problem using the Pythagorean Theorem. From the equation $x^2 + x^2 = 10^2$, I found that the hypotenuse was 100. I was very close to finding the right answer, because I realized that x had to equal 50, but when trying to simplify 50 I couldn't think of any factors